Partnership in Action: Sharing the Responsibility for Drinking Water Protection
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Presented at the National Source Water Protection Conference

Introduction

It is a great pleasure to be with you today and I want to thank the United States Environmental Protection Agency (US EPA) for the invitation to speak about partnerships and source water protection (SWP). This was a great opportunity for me because, as President of the Groundwater Foundation (GF), I've had the privilege of working with a wide variety of partners over the years and many of our partners from Nebraska and across the US are here today.

However, partnerships are changing. In a post 9/11 world, security concerns and shrinking resources mean we all have to do more with less. Partners can no longer be simply names on a list but, as our conference theme emphasizes, today partners must be willing to take action on behalf the important goal of protecting our drinking water. In the future, SWP partnerships will be measured, not by how well each SWP partner performs their task, but rather by how effectively each partner contributes to maintaining or improving drinking water safety.

Partnerships defined and connected

From my perspective, a good definition of partnership is taking, and sharing, responsibility effectively. In light of the new activism that today's headlines and trends demand, sharing responsibility with others within our own immediate community and professions will be more important than ever, and sharing responsibility between entities of diverse mission and experience will be equally vital. As a result, I'd like to use my time today to explore current and emerging trends that provide both opportunity and challenge for sharing SWP responsibility as the partners we are.

A visual representation of partnerships is a series of connected circles, because for source water protection to work all partners must feel connected to each other with the understanding that the activities of one will invariably impact other sectors as well. I offer this perspective in a spirit of mutual learning and with a focus on the future as we launch and nurture our own partnerships over the next two days.

Government partnerships are strengthened through program integration

Pushed initially by reduced resources, the trend towards program integration has gained momentum in recent years by the superior results collaboration achieves. It's great to see EPA is encouraging states and communities to use Clean Water Act (CWA) programs to meet Safe Drinking Water Act (SDWA) goals, and we've learned about several successful examples here at the conference.

Federal agencies are not only collaborating internally, they are also using program integration to form partnerships with other agencies and the communities they serve. Recently, the journal *Stormwater* reported that a storm water compliance plan in Lexington, Kentucky relied on the field expertise of The Natural Resources Conservation Service (NRCS), and the volunteer muscle of local businesses,

environmental groups and area schools to create an organic bio-filter that would improve water quality and save significant treatment costs.

Program integration is happening close to my home too. In Nebraska, thanks to leadership in the SWP and non-point source (NPS) programs, CWA section 319 funds are routinely used on behalf of source water protection. In 2001, 319 funds were used to initiate the Nebraska wellhead protection (WHP) network, a coalition of partners with a shared interest in protecting groundwater as a source of drinking water. Representatives from groups such as the Nebraska Rural Water Association, Nebraska Department of Environmental Quality, and County Health Departments meet regularly for continuing education and simplifying program access for small communities. We knew of each other, but now we are getting to know about each other and work to support each other's distinctive programs.

Utility partnerships are expanding supply options

It's not just the water quality experts getting together. The increasing severity of weather events we've been experiencing, including droughts throughout the US, mean that water quantity and quality program managers are teaming up with public and private utilities to secure ample and safe sources of water. We're learning that shortages don't just occur where there isn't enough water; shortages also occur when there isn't enough clean and safe water.

Two examples come to mind. Just last month, farmers in parched western Nebraska offered to sell irrigation water to a near-by public water system with greatly diminished sources due to the severe drought in the area. However, among the many problems with the plan was the high nitrate level of the irrigation water, decreasing its value to a utility and diminishing the feasibility of the entire plan.

The Orlando Sentinel reports that a turn of the century flood control system consisting of 400 drains that flush excess rainwater directly into local aquifers may have inadvertently contributed pollutants to groundwater that serves as the source of Orlando's drinking water. A former state environmental official reports that "We're finding more and more oil and other substances in the drainage wells. Shallow private drinking water wells in the area have already been polluted. As a result, we've formed a partnership with water districts, local public health agencies, and community groups to address the problem."

This Orlando example reminds us that the good stewardship of one generation can be the environmental challenge of the next, and why we need to keep the longest possible time horizon in mind when implementing SWP programs in the present.

Community partnerships are key to implementation

One of the ways in which the long time horizon is considered is through involving the public and public interest groups in SWP programs. Safeguarding public interest through regulation is a well-known tool throughout the world. However, here in the US we have a long tradition of watchful citizens actively engaged in protecting and enhancing their communities.

Recently, I was asked to speak at an International Association of Hydrologists (IAH) conference in Tullamore, Ireland on the topic of stakeholder involvement, due to the Groundwater Foundation's focus on communities. In Ireland, public participation in environmental protection was viewed as attractive, yet novel. However, even here in the US, educating and involving the public continues to be marginalized. Lip service is always given to its value but outreach programs are almost always the first to go when budgets are tight. In the past public education and involvement was viewed as "nice but not necessary," because many in the drinking water community viewed the public as a challenge to be managed rather than a resource on which to build.

This thinking is changing. Today, we know SWP isn't going to happen without engaged and active citizens, ready and able to help achieve drinking water goals. For this lesson, we can thank our partners in the CWA program. For years, state CWA programs have relied on volunteer monitoring programs and watershed groups to help collect data, inform citizens about threats, and work with local and state officials on protective policies. At the GF, we're working hard to find ways for citizens to gather groundwater data and report it using methods that are useful to states and others.

EPA recognizes the importance of the public as a SWP partner. The source water assessment and storm water programs require public involvement. This official endorsement is welcome. The challenge that remains is to foster public participation on an ongoing basis, rather than an occasion for one-way communication.

Business partnerships are driven by public demand and technology

Technology will play a big part in promoting public participation. This past year the GF had the privilege to form a partnership with the Public Entity Risk Institute to help interested citizens use the Global Positioning System (GPS) and Geographic Information Systems (GIS) to field verify their state assessments by completing a Contaminant Source Inventory. Some of you may have had the benefit of hearing about this successful project from Jarrod Christen (Detroit Lakes Public Utilities, Minnesota) in yesterday's spatial data session, and I've brought primers that summarize its outcomes for the Resource Fair. Experienced based education is education that sticks. In the field action is likely to lead to further involvement in the protection process.

And speaking of the public, thanks to increasingly well-informed and involved consumers who in turn create market pressure, businesses are also participating in environmentally friendly partnerships. Just a couple of weeks ago EPA Administrator Christine Whitman endorsed a new partnership between DaimlerChrysler AG, United Parcel Service, and USEPA. This partnership was billed as the first large-scale use of fuel cell technology by a fleet of commercial vehicles in the US. David Cole of the Center for Automotive Research in Ann Arbor believes that public-private partnerships like this one will transform business models, especially for emerging technologies.

Urban partnerships are impacting planning and growth

Urban growth and development are also important opportunities for creating "green" partnerships like the one launched by Administrator Whitman. Planners and developers have worked together for years. However, environmental impacts and issues were not their central concern. That is changing too.

American Forests is one of several partners behind a movement to promote tree planting and green space in urban areas as a cost effective way to cut costs associated with storm water run-off permits.

Robert Glennon, Professor of Water Law at the University of Arizona and author of *Water Follies* describes how some Arizona developers and local governments are joining forces to implement clean-up programs and enforce conservation requirements in order to insure adequate supplies of drinking water. Closer to Washington DC, Builders for the Bay, a partnership that includes the National Association of Home Builders, was formed in 2001 to reduce negative development impacts in the Chesapeake Bay Watershed. And it's a national trend. In Lincoln, Nebraska, the "Green Homes House Tour" was created by a partnership between the local Home Builders Association and the Mayor's Water Conservation Task Force in order to showcase building practices that reduce the use of toxic products and conserve water in the home.

Rural partnerships face many challenges while filling critical needs

Urban development is understood as a threat to SWP, less well understood and more contentious is rural and suburban development, which has more than its share of under-regulated waste problems. Under-regulated waste is worth noting because unlike the other trends I've mentioned, this one is driving people apart.

For example, the growing popularity of lakeside living and acreage development has meant expanding small cabins into multi-bedroom year-round homes without upgrading onsite wastewater treatment. These aging, leaking septic tanks, combined with the growth of large under-regulated animal production facilities, are making rural areas the newest environmental battleground.

As we all know, water-borne disease rates declined throughout the 20th century in direct proportion to the numbers of sewage treatment systems. However, in a disturbing new trend, up to one third of new residential developments are going in with septic systems, not sewers and this will have serious SWP implications for the future.

At a recent SWP training seminar in Minnesota we learned from an EPA official that one failing aerobic septic system might contain more pathogens than the entire wastewater stream from the cities of Minneapolis-St. Paul. Coping with human and animal waste on previously unregulated or under-regulated sites presents serious challenges to communities committed to implementing protection programs. In a way it's ironic that some of our most intractable water quality problems are now occurring the very areas that were once thought to be among the most pristine and attractive.

The GF is beginning to address this problem through several new projects including a septic tank education program at Nebraska lakes. We've used seminars and best practice demonstrations to promote safe septic tank siting and maintenance. Future plans include the development of a partnership between lake residents and area realtors, onsite-waste water treatment system installers and local inspectors for the purpose of developing specific management plans.

Whatever course we choose in addressing these rural SWP challenges, it will be partnerships that will get the job done, even between stakeholders as diverse as ranch managers and resort developers.

Partnerships in Action: Sharing the Responsibility for Drinking Water Protection:
We know that the days of protecting drinking water without partnerships are long past. And partnerships between like-minded parties with similar backgrounds are surprisingly ineffective. Partnerships work best when each individual or organization brings diverse expertise and perspective to the table.

The GF Groundwater Guardian (GG) program reflects this premise. GG Designation is earned when a diverse local team takes action to protect local groundwater supplies. And although the local team itself represents a partnership among team members, several years ago the GF added an explicit partnership component to GG called GG Affiliates.

Groundwater Guardian Affiliates are organizations such as state agencies and water utilities that believe in sharing responsibility for SWP by forming a partnership with communities in their area. We've found that GG community teams that have the benefit of an Affiliate partnership are more likely to keep their team together and successfully complete their groundwater protection projects.

The Mecklenburg County, North Carolina Groundwater Program is a great example of an Affiliate partnership as a catalyst for both partnership and action. The county-wide program has formed working partnerships with each of the communities within their jurisdiction and facilitated partnerships between the communities within the county. And we all know how tough that can be!

The result, the region's groundwater is protected more effectively through a county-wide WHP plan that includes both urban and rural areas, a willingness to share technology, and this Affiliate has also demonstrated a commitment to educated citizens through sponsoring Awesome Aquifer Clubs in each of the counties' school districts.

Conclusion
Program integration, connecting water quantity and quality, working with citizens to implement SWP tools, using green products, supporting water friendly land-use practices, and bringing rural and urban interests together are all important.

Partnerships within and between stakeholder groups help each of us take and share responsibility for our precious water supplies and accomplish together what we can't do by ourselves.